ABSTRACT

Herein is disclosed a method of generating ascorbic acid from yeast. In one embodiment, the yeast is a *Zygosaccharomyces* spp. or a *Kluyveromyces* spp. growing in a medium comprising an ascorbic acid precursor. In a second embodiment the yeast is a recombinant yeast growing in a medium comprising an ascorbic acid precursor. Preferably the recombinant yeast is transformed with a coding region encoding an enzyme selected from L-galactose dehydrogenase (LGDH), L-galactono-1,4-lactone dehydrogenase (AGD), D-arabinose dehydrogenase (ARA), D-arabinono-1,4-lactone oxidase (ALO) or L-gulono-1,4-lactone oxidase (RGLO). The ascorbic acid precursor is preferably D-glucose, L-galactose, L-galactono-1,4-lactone, or L-gulono-1,4-lactone. In another preferred embodiment the ascorbic acid is accumulated in the medium at levels greater than background. Preferably, the yield of the conversion of the precursor to ascorbic acid is preferably at least about 35%.